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EXAMINER	
SWEARINGEN, JEFFREY R	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/032,325	PERHOLTZ ET AL.	
	Examiner	Art Unit	
	Jeffrey R. Swearingen	2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) *222-225* is/are withdrawn from consideration.

5)☒ Claim(s) *1-21* is/are allowed.

6)☒ Claim(s) *123-128,136-140,144-162,165-170,172-183,186-189,193-221,226 and 239-246* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1-21,123-128,136-140,144-162,165-170,172-183,186-189,193-221,226 and 239-246.

DETAILED ACTION

Response to Arguments

1. Applicant may have misunderstood the rejection of the oath in the previous Office Action, based on the footnote to the response on page 9, filed 9/30/2010. The oath and declaration are rejected because Applicant has not provided written consent of all assignees.

2. The following is excerpted from MPEP 1410.01. The reissue oath or declaration must be accompanied by written consent of all assignees. 35 U.S.C. 111(a) and 37 CFR 1.53(b) provide, however, for according an application a filing date if filed with a specification, including claim(s), and any required drawings. Thus, where an application is filed without an oath or declaration, or without the consent of all assignees, if the application otherwise complies with 37 CFR 1.53(b) and the reissue rules, the Office of Patent Application Processing (OPAP) will accord a filing date and send out a notice of missing parts setting a period of time for filing the missing part and for payment of any surcharge required under 37 CFR 1.53(f) and 1.16(f). If the reissue oath or declaration is filed but the assignee consent is lacking, the surcharge is required because, until the consent is filed, the reissue oath or declaration is defective, since it is not apparent that the signatures thereon are proper absent an indication that the assignees have consented to the filing. The consent of assignee must be signed by a party authorized to act on behalf of the assignee. See MPEP § 324 for a discussion of parties authorized to act on behalf of the assignee.

3. Where the written consent of all the assignees to the filing of the reissue application cannot be obtained, applicant may under appropriate circumstances petition to the Office of Petitions (MPEP § 1002.02(b)) for a waiver under 37 CFR 1.183 of the requirement of 37 CFR 1.172, to permit the acceptance of the filing of the reissue application. The petition fee under 37 CFR 1.17(f) must be included with the petition. The reissue application can then be examined, but will not be allowed or issued without the consent of all the assignees as required by 37 CFR 1.172.

4. Where a continuation reissue application is filed with a copy of the assignee consent from the parent reissue application, and the parent reissue application is not to be abandoned, the copy of the consent should not be accepted.

5. This section of the MPEP indicates that at minimum a copy of the written consent must be filed with the reissue oath or declaration, regardless of whether the parent reissue is intended to be abandoned. Additionally, this is a separate issue from the petition to accept the oath in the parent application, which requires a separate petition to address the issue.

6. Because of Applicant's misunderstanding of the issue, this action is hereby made non-final.

7. Based on the above reasoning, the oath remains rejected based upon lack of written consent and failure to file the appropriate petition.

8. The updated consent of assignee is accepted.

9. The objection to the specification based on submission format is withdrawn.

10. Claims 123-128, 136-140, 144-162, 165-170, 172-183, 186-189, 193-226, and 239-246 remain rejected as being based upon a defective reissue oath.

11. The rejection of claim 123 under 35 USC 112, second paragraph is withdrawn.

12. The rejection of claim 194 under 35 USC 112, second paragraph is maintained. Applicant has not explained how the claim is to be interpreted as a working part of a system which is receiving data from a nonworking data processing device. It appears from a reading of the claim that the computer monitoring system comprises a video display terminal, the data processing device and the microprocessor controlled computer hardware device. The claim is interpreted as best possible for purposes of compact prosecution.

13. The rejection of claim 212 under 35 USC 112, second paragraph is maintained. Applicant's claim is transmitting video over a connection that cannot be formed or maintained, based on the current claim language. It is unclear whether the remote access system includes both the remote computer and the host computer, or just the remote computer. It is unclear how the remote computer can receive video signals from the host computer if the host computer is unable to accept user input signals, which therefore would terminate the connection between the remote computer and the host computer as the exchange of signals is necessary for a transmission link between the remote computer and the host computer.

14. Regarding claim 123, Applicant argues that Howse in view of McKay fail to disclose an on-screen display process, execution of the on-screen display process at the remote site providing a pop-up screen on the remote display device, the pop-up

comprising a menu identifying the host computers at the plural host computer sites, the pop-up screen at least overlaying the video appearing on the remote display device as a result of the first connection; whereupon operation of the remote input device in response to the menu of the pop-up screen causes the remote site to terminate the first connection and to establish a second connection between a second selected host computer and the remote site. The creation of a menu driven interface for remote access is "the pop-up screen is at least overlaying the video appearing on the remote display device as a result of the first connection. Applicant's argument has raised claim construction issues concerning claim 212, which are newly addressed in the rejection under 35 USC 112, second paragraph below. Applicant argued that McKay failed to disclose "operation of the remote input device in response to the menu of the pop-up screen causes the remote site to terminate the first connection and to establish a second connection between a second selected host computer and the remote site." The selections from the McKay pop-up menu control which input is selected under Howse. Displaying video from an input is done through establishing a connection. Switching to another video input is terminating the video connection.

15. Regarding claim 123, Applicant argues that there is no motivation to combine Howse in view of McKay. Applicant appears to be arguing that there is no teaching, statement or motivation within the two patents to allow for combination. The teaching, statement or motivation test was only one of possible tests to use when determining obviousness under KSR v. Teleflex and Federal Circuit cases following KSR. In this case, the Office has laid out a reasoned motivation for the combination of the two

references - using a menu to select between two inputs. Furthermore, the Office pointed out that the element of Howse requiring a single keyboard to selectively display inputs would need to allow a user to select the inputs. McKay provided a menu to allow user selection. Applicant's argument concerning "where on the remote site is the on-screen display process supposedly running?" is unclear. Howse has a system which received remote data feeds from remote computers. This is the on-screen display process.

16. Regarding claim 186, Applicant argues that there is no motivation to combine Howse with McKay. Applicant appears to be arguing that there is no teaching, statement or motivation within the two patents to allow for combination. The teaching, statement or motivation test was only one of possible tests to use when determining obviousness under KSR v. Teleflex and Federal Circuit cases following KSR. In this case, the Office has laid out a reasoned motivation for the combination of the two references - using a menu to select between two inputs. Furthermore, the Office pointed out that the element of Howse requiring a single keyboard to selectively display inputs would need to allow a user to select the inputs. McKay provided a menu to allow user selection.

17. Regarding claim 188, Applicant argues that Howse in view of McKay failed to disclose "the keyboard interface communicates with the selected computer processor through a keyboard port of the selected computer processor." Applicant is directed to Figure 1, items 42b and 48b which teach a keyboard display driver and a keyboard code converter receiving information from keyboard 38. This is "the keyboard interface

communicates with the selected computer processor through a keyboard port of the selected computer processor."

18. Regarding claim 193, Applicant argues that there is no motivation to combine Howse in view of McKay. Applicant appears to be arguing that there is no teaching, statement or motivation within the two patents to allow for combination. The teaching, statement or motivation test was only one of possible tests to use when determining obviousness under KSR v. Teleflex and Federal Circuit cases following KSR. In this case, the Office has laid out a reasoned motivation for the combination of the two references - using a menu to select between two inputs. Furthermore, the Office pointed out that the element of Howse requiring a single keyboard to selectively display inputs would need to allow a user to select the inputs. McKay provided a menu to allow user selection. Applicant's argument concerning "where on the remote site is the pop up menu utility supposedly running?" is unclear. Howse has a system which received remote data feeds from remote computers. This is the on-screen display process. McKay's menu is the pop up menu utility. The combination of the two would necessitate the menu of McKay would run on the Howse display system.

19. Regarding claim 211, Applicant argues that Howse in view of Youngblood failed to disclose "a main CPU to coordinate an analog to digital conversion of host video signals from the host server." This claim language does not require that the CPU perform the analog to digital conversion or control the analog to digital conversion. The CPU "coordinates" the conversion, which is as simple as controlling the operation of devices on the host server where the devices happen to perform the analog to digital

conversion. In both Howse and Youngblood, a remote system communicates with a host system. Youngblood discloses the use of a fiber optic connection, for example. Analog signals could not be sent over a fiber optic connection without being digitized.

20. In regard to claim 157, Applicant argues that Howse in view of Heider failed to disclose "whereby at least a situation requiring a reset operation appears at the host unit and (2) upon receipt of a reset command, causes the host unit to initiate a reset operation of the host computer." "The console server computer system determines whether a remote reset request is included in a data packet received by the computer system from the standard network interconnection". Heider, column 13, line 68 - column 14, line 3. The arrival of a remote reset request in a packet is "a situation requiring a reset operation which appears at the host unit."

21. In regard to claim 160, Applicant argues that Howse in view of Heider failed to disclose "whereby at least a situation requiring a reset operation appears at the host unit and (2) upon receipt of a reset command, causes the host unit to initiate a reset operation of the host computer." "The console server computer system determines whether a remote reset request is included in a data packet received by the computer system from the standard network interconnection". Heider, column 13, line 68 - column 14, line 3. The arrival of a remote reset request in a packet is "a situation requiring a reset operation which appears at the host unit."

22. In regard to claim 241, Applicant argues that Howse in view of Heider failed to disclose "a control module having an AC power input to receive AC power from an external power source, an AC power output to deliver the AC power from the external

power source to the host computer, a switch therebetween, and a control data input to receive a reboot signal and thereupon interrupt AC power to the host computer by operation of the switch." The execution of the reset command in Heider interrupts AC power to the host computer.

23. In regard to claims 157, 158, 160, 161, 241 and 242, Applicant argues there is no motivation to combine Howse in view of Heider. Applicant argues there is no need to add Howse to Heider, when in fact the rejection is adding the reboot operations of Heider to Howse. In addition, Howse is not limited to an APPLE II computer. See Howse, column 2, lines 39-46, which suggests an APPLE II computer system could be one of many remote host computers performing conventional data communications.

24. In regard to claims 159 and 162, Applicant argues that Moseley failed to disclose "the host unit includes a carrier detect circuit and automatically causes the reset operation upon a determination made by the carrier detect circuit of the absence or presence of the carrier signal." The carrier detect circuitry is taught in Moseley, column 4, lines 40-68. The carrier signal in Moseley/Howse/Heider is not a reset signal per se, but acts as an input which causes a condition in Howse/Heider to implement a reset.

25. In regard to claims 159 and 162, Applicant argues there is no motivation to combine the references of Howse, Heider and Moseley. Applicant only looks to the Moseley reference. Moseley's carrier detect modifies the Howse/Heider combination. Applicant's analysis only looks to modifying the Moseley reference, which in itself is modifying two other references.

26. In regard to claims 136, 139, 144, 146 and 151, Applicant argues that Howse in view of Long failed to disclose "analog to digital conversion of video signals prior to transmission." Applicant argues there is no motivation to combine Howse and Long. Howse disclosed a remotely operating system which transmitted video inputs to a terminal. Long disclosed the conversion of analog to digital video signals. Long does discuss synchronization of remote TV systems. However, Long also expressly states "due to the delays introduced by the transmission of the signals along finite distances and other factors, phase and frequency errors are nevertheless introduced into the remote signals which result in signal degradation when switching from...one remote source to another remote source." Long, column 1, lines 58-64. This description is what Howse has designed - a system for switching between remote video sources where signals are transmitted along finite distances. The introduction of Long is to further emphasize what could be read as inherent in Howse - the digitization and transmission of video signals from a remote site.

27. In regard to claim 220, Applicant argues Howse failed to disclose "a set of circuit modules in communication with a set of corresponding host computers to receive analog video signals from the corresponding host computers, to digitize the analog video signals." Applicant argues the Office's characterization of Howse teaching "a set of circuit modules in communication with a set of corresponding host computer to receive analog video signals from the corresponding host computers, to digitize the analog video signals" is contrary to the Office's allegation that Howse failed to disclose "a computer access interface...and transmitting to the remote access facility via the non-

-dedicated serial channel a digitized version of the analog video signals. The communications interface between the remote host computers and the recipient performs all of the claimed functions. Analog signals are received from host computers, digitized, and delivered to the remote computer for display. As shown in Figure 1 of Howse, there is a remote data feed between the terminals. The analog signals are converted to serial data in order to be transmitted – the digitization of analog signals. The digitization of analog signals is also disclosed in Long – see Long, column 2, lines 14-42 and column 3, line 52 – column 4, line 18.

28. In regard to claim 220, Applicant argues that Long failed to disclose "to synchronize the video signals to a video display characteristic of the remote computer." Long states "incoming video signals are converted from analog to digital form and are clocked into a shift register by input clock signals derived from the horizontal sync and color burst portions of the incoming signals. The input clock signals are phase and frequency locked to the instantaneous horizontal frequency and the color burst frequency portions of the incoming signal." This is "synchronizing the video signals to a video display characteristic of the remote computer." Furthermore, see a more in depth description in Long, column 5, line 61 - column 6, line 36. "The composite sync signals output from output sync generator 37 are coupled to memory control unit 25 and act as supervisorial signals for conditioning tap selection control and enabling the output of digital characters from vernier RAM assembly 30 to DAC 17, and are also coupled to an input of processor amplifier 18 as information signals service to enable the reinsertion of composite sync signals into the reconverted synchronized video signals."

29. In regard to claim 220, Applicant argues there is no motivation to combine Howse and Long. Howse disclosed a remotely operating system which transmitted video inputs to a terminal. Long disclosed the conversion of analog to digital video signals. Long does discuss synchronization of remote TV systems. However, Long also expressly states "due to the delays introduced by the transmission of the signals along finite distances and other factors, phase and frequency errors are nevertheless introduced into the remote signals which result in signal degradation when switching from...one remote source to another remote source." Long, column 1, lines 58-64. This description is what Howse has designed - a system for switching between remote video sources where signals are transmitted along finite distances. The introduction of Long is to further emphasize what could be read as inherent in Howse - the digitization and transmission of video signals from a remote site.

30. In regard to claim 221, Applicant argues that Howse in view of Long in view of Youngblood failed to disclose "a video RAM to store host video signals digitized by the main CPU and field programmable array, and to deliver the digitized video signals to the remote access engine for delivery to the remote computer, the video RAM in communication with the field programmable gate array to receive at least video sync processing from the field programmable gate array." The element disclosed in Howse column 4, lines 37-67 is the specific video RAM element. Analog signals are received from host computers, digitized, and delivered to the remote computer for display. As shown in Figure 1 of Howse, there is a remote data feed between the terminals. The

analog signals are converted to serial data in order to be transmitted – the digitization of analog signals.

31. In regard to claim 243, Applicant argued that Howse failed to disclose "a video process to capture and digitize the video signals from the host PC." Analog signals are received from host computers, digitized, and delivered to the remote computer for display. As shown in Figure 1 of Howse, there is a remote data feed between the terminals. The analog signals are converted to serial data in order to be transmitted – the digitization of analog signals.

32. In regard to claim 243, Applicant argued that Harlan failed to disclose "the position of said mouse pointer is delayed by a period associated with the capturing and digitizing steps." The delay of "a period associated with the capturing and digitizing steps" is the normal delay incurred when transmitting a signal over a remote connection. "The system transfers the changes which appear on display from CUSTOMER PC display to SUPPORT PC display." By the two computers being separate, there is an inherent "period associated with the capturing and digitizing steps" involved in translating the analog commands of the mouse movement to a digital signal sent to a remote PC.

33. In regard to claim 152, Applicant argued that Heider failed to disclose "wherein the computer processor receives AC power and the computer access interface receives a request to break the AC power and then coordinates a break in the AC power to the computer processor." The execution of the reset command in Heider is a break in the AC power to the host computer. Some element of the host computer must be reset in

some manner, and therefore there is a slight break in the AC power to at least a portion of an element of the host computer.

34. In regard to claim 127, Applicant argued that Heider failed to disclose "wherein for each of the host computers the host unit is connected between the host computer and a source of power for the host computer, and wherein upon receipt of the cold boot command from the remote site the host unit temporarily interrupts power to the host processor of the host computer." The execution of the reset command in Heider is a temporary interruption in the power to the host processor of the host computer. Some element of the host computer must be reset in some manner, and therefore there is a slight break in the AC power to at least a portion of an element of the host processor of the host computer.

35. In regard to claim 189, Applicant argued that Youngblood failed to disclose "the mouse interface communicates with the selected computer processor through a mouse port of the selected computer processor." The remote terminal comprises a parallel port and serial ports. One of ordinary skill in the art is aware that at the time of invention, computer mice were available both in a "mouse port" version (PS/2) and a serial port version.

36. In regard to claim 165, Applicant argued that Howse failed to disclose "a keyboard port for keyboard signals, the network connector also delivering keyboard signals from the remote station to the keyboard port via the established logical digital data path." Applicant misinterprets the statements in the Office Action, as the "does not disclose" statement is used to teach the functional elements of transmission of digitized

video signals more clearly through Youngblood. The keyboard signals are transmitted "via the established logical digital data path" in Howse. The "keyboard port" in Howse is not necessarily limited to a hardware port. Here, the fiber optic connection functions as a digital data path to transmit keyboard signals from the remote computer to the keyboard port.

37. In regard to claim 165, Applicant argued that Howse failed to disclose "a mouse port for mouse signals, the network connector also delivering mouse signals from the remote station to the mouse port via the established logical digital data path." Here, the fiber optic connection functions as a digital data path to transmit mouse signals from the remote computer to the mouse port. Applicant has not limited a mouse port to its specific hardware version in the computer.

38. In regard to claim 165, Applicant argued there is no motivation to combine Howse and Palmer. Applicant misinterprets the Howse reference. There must be analog video in Howse in order to convert it to the digitized video to be transmitted in Howse. Packetization is the preferred method that would be used in transmitting large amounts of data as in Howse.

39. In regard to claim 177, Applicant argued that Long failed to disclose "a synchronize detect circuit that detects vertical and horizontal synchronize signals from an analog video signal" and "a microprocessor that determines a clocking rate at which the analog video signal should be sampled from the timing of the vertical and horizontal synchronize signals." Long states "incoming video signals are converted from analog to digital form and are clocked into a shift register by input clock signals derived from the

horizontal sync and color burst portions of the incoming signals. The input clock signals are phase and frequency locked to the instantaneous horizontal frequency and the color burst frequency portions of the incoming signal." This is the detection of vertical and horizontal synchronize signals from an analog video signal and the determining of a clocking rate at which the analog video signal should be sampled from the timing of the vertical and horizontal synchronize signals. Furthermore, see a more in depth description in Long, column 5, line 61 - column 6, line 36. "The composite sync signals output from output sync generator 37 are coupled to memory control unit 25 and act as supervisorial signals for conditioning tap selection control and enabling the output of digital characters from vernier RAM assembly 30 to DAC 17, and are also coupled to an input of processor amplifier 18 as information signals service to enable the reinsertion of composite sync signals into the reconverted synchronized video signals."

40. In regard to claim 213, Applicant argued that Long failed to disclose "a video processing circuit, including a cpu and a programmable gate array, connected to the sync polarity circuits, the phase locked loop video dot clock circuit, and the TTL converter to automatically determine a graphics mode of the red, green and blue analog video signals." Long applied "local color reference subcarrier signals" which act as the determination of "a graphics mode of the red, green and blue analog video signals."

41. In regard to claim 218, Applicant argued that Long failed to disclose "wherein the video processing circuit includes memory to store a set of predefined video graphics mode characteristics, and wherein the video processing circuit further divides the red, green and blue analog video signals into one or more video screen segment parts and

compares the video screen segment parts to the stored predefined video graphics mode characteristics." The analog video is "sampled" into 8 bit digital characters, which is dividing the signals into "video screen segment parts". Long goes into greater detail in US Patent 3,860,952, incorporated by reference. The sampling of the video in Long is the "storing and managing of checksums associated with each video screen segment part."

42. In regard to claims 177, 183, 204-210 and 213-219, Applicant argues there is no motivation to combine Palmer and Long. Motivation to combine Palmer can further be found from column 16, line 3 to line 18 of Palmer, which discloses the dropping of old video packets in favor of the "last available and freshest video frame".

43. In regard to claim 239, Applicant argued that Brown failed to disclose "video processing circuitry to digitize the RGB video information and to decode a video format of the RGB video information received by the video input circuitry", and "a flash palette converter RAM being addressed by the stream of digital RGB pixel data and outputting for each RGB pixel an palette index byte corresponding to a color value of said RGB pixel." When the packetized video signals are received in Brown 9:48-49, they must be "decoded" or processed as in 9:58. The three color planes are defined - a "palette index byte corresponding to a color value of said RGB pixel."

44. In regard to claim 169, Applicant argued that there was no motivation to combine Howse Palmer and Ishikawa. Applicant misinterprets the Howse reference. There must be analog video in Howse in order to convert it to the digitized video to be transmitted in

Howse. Packetization is the preferred method that would be used in transmitting large amounts of data as in Howse.

45. In regard to claim 212, Applicant argued that Beard failed to disclose "a video process to capture the video signals, digitize them and format them for transmission to the remote computer, even when the host computer has locked up to no longer accept any user input signals." Applicant has failed to clearly write the claim to allow transmission when "the host computer has locked up to no longer accept any user signals." Beard discloses a method of data transfer with a PC emulator, which is the best interpretation possible of "the host computer has locked up to no longer accept any user signals."

46. In regard to claim 194, Applicant argued that Beard failed to disclose "a microprocessor controlled computer hardware device working even if the data processing device is locked up and no longer processing data or input commands." Applicant has failed to clearly write the claim to allow transmission when "the host computer has locked up to no longer accept any user signals." Beard discloses a method of data transfer with a PC emulator, which is the best interpretation possible of "a microprocessor controlled computer hardware device working even if the data processing device is locked up and no longer processing data or input commands."

47. In regard to claim 194, Applicant argued there was no motivation to combine Beard with the other patents. Beard is applied as best possible for purposes of compact prosecution, since Applicant's claim language is indefinite and unclear.

48. In regard to claim 226, Applicant argued Heider failed to disclose "an external modem and a control module providing AC power to the host computer, the external modem communicating with the control module and automatically answering calls received by the external modem on a different telecommunications link, said control module temporarily interrupting power to the host computer whenever said external modem automatically answers a call." The execution of the reset command in Heider is a temporary interruption in the power to the host processor of the host computer. Some element of the host computer must be reset in some manner, and therefore there is a slight break in the AC power to at least a portion of an element of the host processor of the host computer.

Reissue Applications

Oath/Declaration

49. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The reissue oath or declaration must be accompanied by written consent of all assignees. MPEP 1410.01.

Where the written consent of all the assignees to the filing of the reissue application cannot be obtained, applicant may under appropriate circumstances petition to the Office of Petitions (MPEP 1002.02(b)) for a waiver under 37 CFR 1.183 of the requirement of 37 CFR 1.172, to permit the acceptance of the filing of the reissue application. The petition fee under 37 CFR 1.17(f) must be included with the petition.

Applicant submitted a copy of an oath/reissue declaration on 3/4/2002. The reissue/declaration stated that Ronald J. Perholtz declared on behalf of himself and for joint inventor Eric J. Elmquest. Mr. Perholtz averred that Mr. Elmquest cannot be found after diligent effort. Because Mr. Elmquest could not be located, Mr. Perholtz declared on behalf of Mr. Elmquest.

The reissue declaration does not have written consent of all assignees, because Mr. Perholtz signed the declaration on behalf of Mr. Elmquest. Applicant failed to petition the Office of Petitions for a waiver under 37 CFR 1.183 of the requirement of 37 CFR 1.172, to permit the acceptance of the filing of the reissue application. The reissue declaration is defective because the declaration does not have written consent of all assignees, and because Applicant failed to petition for a waiver to permit the acceptance of the filing of the reissue application.

50. Claims 123-128, 136-140, 144-162, 165-170, 172-183, 186-189, 193-226, and 239-246 are rejected as being based upon a defective reissue oath under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the oath is set forth in the discussion above in this Office action.

Claim Rejections - 35 USC § 112

51. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

52. Claims 194 and 212 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

53. In regard to claim 194, the data processing device comprises *a microprocessor controlled computer hardware device working even if the data processing device is locked up and no longer processing data or input commands*... It is unclear how Applicant interprets that the *microprocessor controlled computer hardware device*, which is part of the data processing device, is able to perform functionality (e.g. *working*) *even if the data processing device is locked up and no longer processing data or input commands*. The microprocessor hardware device appears to be a working part of a non-working device from the claim language, and is interpreted as best possible for purposes of compact prosecution.

54. In regard to claim 212, the host computer has a video process to capture video signals, digitize them and format them for transmission to the remote computer, even when the host computer has locked up to no longer accept any user input signals. Transmission requires an external input from the remote terminal (e.g. "user") in order to exchange the information between the remote terminal and the host computer and

establish the connection. Applicant's claim essentially is transmitting video over a connection that cannot be formed or maintained because the host computer has locked up, and is interpreted as best possible for purposes of compact prosecution. It is not clear whether the pop-up screen on the remote display device is part of the video appearing on the remote display device from the first connection, which would mean the pop-up screen is part of the video from the first selected host computer and appearing on the first selected host computer.

Claim Rejections - 35 USC § 103

55. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

56. Claims 123-125, 186, 188, and 193 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse et al. (4,404,551) in view of McKay et al. (US 4,893,307).

57. In regard to claim 123, Howse disclosed *a computer monitoring system comprising:*

plural host computer sites, each host computer site having at least one host computer, the at least one host computer including a host processor, a host input device, and a host display device; Howse, column 2, lines 4-46

a remote processor situated at a remote site, the remote processor having a remote display device and a remote input device connected thereto; Howse, column 2, lines 4-46

a network linking the remote site and each of the plural host computer sites, the network facilitating a first connection between a first selected host computer at a first host computer site and the remote site, and during the first connection either: Howse, column 2, lines 4-46

(a) transmitting screen data from the host display device of the first selected host computer to the remote display device, or Howse, column 3, lines 6-14

(b) transmitting input signals from the remote input device to the first selected host computer for controlling the first selected host computer; Howse, column 3, lines 15-31

Howse failed to disclose *an on-screen display process, execution of the on-screen display process at the remote site providing a pop-up screen on the remote display device, the pop-up comprising a menu identifying the host computers at the plural host computer sites, the pop-up screen at least overlaying the video appearing on the remote display device as a result of the first connection; whereupon operation of the remote input device in response to the menu of the pop-up screen causes the remote site to terminate the first connection and to establish a second connection between a second selected host computer and the remote site.*

However, McKay disclosed *an on-screen display process, execution of the on-screen display process at the remote site providing a pop-up screen on the remote display device, the pop-up comprising a menu identifying the host computers at the plural host computer sites, the pop-up screen at least overlaying the video appearing on the remote display device as a result of the first connection; whereupon operation of the remote input device in response to the menu of the pop-up screen causes the remote site to terminate the first connection and to establish a second connection between a second selected host computer and the remote site.* McKay, column 55, lines 11-30. McKay disclosed a system which allowed a remote terminal user to select and access a host. The program provides menu-driven services to the user, including "user selection of a host system and application."

Howse disclosed using a single keyboard to selectively display any inputs from a remote terminal. Howse, column 2, lines 15-29. McKay presented using a menu system to allow user selection. McKay, column 55, lines 11-30. It would have been obvious to one of ordinary skill in the art at the time of invention to add a menu system to the selection techniques of Howse in order for the user to see which video displays they were selecting from.

58. In regard to claim 124, Howse disclosed *wherein the second selected host computer is situated at a second host computer site.* Howse, column 2, lines 4-46

59. In regard to claim 125, Howse disclosed *wherein at least one of the plural host computer sites comprises a network of host computers.* Howse, column 2, lines 4-46

60. In regard to claim 186, Howse disclosed *a system for interfacing keyboard signals with a selected computer processor generating video signals, comprising:*

a network access device to interface with a network including the plurality of computer processors and the selected computer processor; Howse, column 4, lines 1-3

a video interface to receive information indicative of the video signals from the network via the network access device; Howse, column 3, lines 32-63

a keyboard interface to read the keyboard signals and to deliver the keyboard signals to the selected computer processor via the network and the network access device. Howse, column 3, lines 15-31

Howse failed to disclose *an on-screen display generator to create a menu for a monitor associated with the keyboard signals, said menu listing the selected computer*

processor among a plurality of other computer processors for selection by a user of the monitor;

However, McKay disclosed *an on-screen display generator to create a menu for a monitor associated with the keyboard signals, said menu listing the selected computer processor among a plurality of other computer processors for selection by a user of the monitor;* McKay, column 55, lines 11-30. McKay disclosed a system which allowed a remote terminal user to select and access a host. The program provides menu-driven services to the user, including "user selection of a host system and application."

Howse disclosed using a single keyboard to selectively display any inputs from a remote terminal. Howse, column 2, lines 15-29. McKay presented using a menu system to allow user selection. McKay, column 55, lines 11-30. It would have been obvious to one of ordinary skill in the art at the time of invention to add a menu system to the selection techniques of Howse in order for the user to see which video displays they were selecting from.

61. In regard to claim 188, Howse disclosed *the keyboard interface communicates with the selected computer processor through a keyboard port of the selected computer processor.* Howse, column 3, lines 15-31

62. In regard to claim 193, Howse disclosed *a system, comprising:*

a hardware host unit coupled to a host computer different from the hardware host unit; and Howse, column 2, lines 4-46

a remote computer software utility, located at a remote site computer, comprising: Howse, column 2, lines 4-46

a connection utility to establish a communication session with the host unit over a communication link; and Howse, column 2, lines 4-46

Howse failed to disclose *a pop up menu utility providing at least a user choice at the remote site computer to obtain access to the host computer via the connection utility.*

However, McKay disclosed *a pop up menu utility providing at least a user choice at the remote site computer to obtain access to the host computer via the connection utility.* McKay, column 55, lines 11-30. McKay disclosed a system which allowed a remote terminal user to select and access a host. The program provides menu-driven services to the user, including "user selection of a host system and application."

Howse disclosed using a single keyboard to selectively display any inputs from a remote terminal. Howse, column 2, lines 15-29. McKay presented using a menu system to allow user selection. McKay, column 55, lines 11-30. It would have been obvious to one of ordinary skill in the art at the time of invention to add a menu system to the selection techniques of Howse in order for the user to see which video displays they were selecting from.

63. Claim 211 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse et al (4,404,551) in view of Youngblood et al. (5,062,059).

64. In regard to claim 211, Howse disclosed *a circuit module for a computer having in operation therein a remote access engine to communicate between a host server and a remote workstation, comprising:*

a main CPU to coordinate a analog to digital conversion of host video signals from the host server; Howse, column 4, lines 44-54; Howse, column 3, lines 37-47

a field programmable gate array, in communication with the main CPU; Howse, column 3, lines 37-47

a video interface circuit, in communication with the field programmable gate array, to capture the host video signals for the main CPU and field programmable gate array; Howse, column 3, lines 37-47

a video RAM to store host video signals digitized by the main CPU and field programmable gate array, and to deliver the digitized video signals to the remote access engine for delivery to the remote computer, the video RAM in communication with the field programmable gate array to receive at least video sync processing from the field programmable gate array; Howse, column 4, display RAM, lines 37-67

at least one of a ... and a keyboard driver circuit, in communication with the main CPU, to receive, respectively, ... and keyboard information from the remote computer; Howse, column 3, lines 15-31

a bus controller, in communication with the field programmable gate array, to communicate information identifying the digitized host video signals and the … and keyboard information to the remote access engine. Howse, column 4, line 58

Howse failed to disclose *at least one of a mouse driver circuit … in communication with the main CPU, to receive, respectively, mouse … information from the remote computer;*

a bus controller, in communication with the field programmable gate array, to communicate information identifying … the mouse … to the remote access engine.

However, Youngblood disclosed *at least one of a mouse driver circuit … in communication with the main CPU, to receive, respectively, mouse … information from the remote computer;*

a bus controller, in communication with the field programmable gate array, to communicate information identifying … the mouse … to the remote access engine.

Youngblood disclosed a remote terminal system. Youngblood stated the use of a mouse, keyboard, and video display unit were well known input/output devices for such systems. Youngblood, column 4, lines 17-44. The remote bus is taught in Youngblood, column 4, lines 45-62.

Howse disclosed the use of a remote terminal system. Youngblood also disclosed use of a remote terminal system, but supported a mouse. Howse, specifically disclosed the use of a conventional Apple II system. See Howse, column 2, lines 43-46. One of ordinary skill in the art was aware that the Apple II supported use of a mouse. See Sander et al., US 4,888,680, column 1, lines 17-18 for evidence of Apple II support

of a mouse. Because Howse used an Apple II for a remote terminal system, and because Youngblood disclosed the well known use of a mouse as an input/output device for a terminal, and because Howse used the keyboard as an input/output device for the system, and because Youngblood taught the mouse and keyboard were both well known input/output devices for remote terminal systems (supported by the Sander evidence), it would have been obvious to one of ordinary skill in the art at the time of invention to use the mouse of Youngblood with the Howse remote terminal system.

65. Claims 157-158, 160-161, and 241-242 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse et al (4,404,551) in view of Heider (5,276,863).

66. In regard to claim 157, Howse disclosed *a system for monitoring a host computer from a remote processor the host computer including a host processor and a host display device port and the remote processor including a remote display device comprising:*

a host unit connected between the remote processor and the host computer which (1) causes screen data output on the host display device port to appear also on the remote display device ... Howse, column 2, lines 47-64.

Howse failed to disclose *whereby at least a situation requiring a reset operation appears at the host unit and (2) upon receipt of a reset command, causes the host unit to initiate a reset operation of the host computer.*

However, Heider disclosed *whereby at least a situation requiring a reset operation appears at the host unit and (2) upon receipt of a reset command, causes the host unit to initiate a reset operation of the host computer.* Heider sent a remote reset request to the console computer. Heider, column 14, lines 3-17

Howse disclosed the ability to communicate with a remote system to retrieve and / or insert data. Howse, column 3, lines 1-5. Heider disclosed using a diagnostic program (column 3, lines 1-2) which would require a remote reboot of a computer when there is a system hangup or crash. Heider, column 3, lines 10-29. Remote diagnostics would require the ability to communicate with a remote system to retrieve and/or transmit data. Therefore it would have been obvious to one of ordinary skill in the art at

the time of invention to combine Heider's remote reboot with Howse's remote terminal control system.

67. In regard to claim 158, Heider disclosed *wherein the host unit also automatically causes a reset operation whenever a connection between the remote processor and the host unit is terminated.* Heider, column 12, lines 49-59

68. In regard to claim 160, Howse disclosed *a method of monitoring a computer system comprising:*

providing a host unit between a host computer and a remote processor; the host computer including a host processor and a host display device port, the remote processor including a remote display device; Howse, column 2, lines 47-64.

using the host unit to cause screen data output on the host display device port to appear also on the remote display device ... Howse, column 2, lines 47-64.

Howse failed to disclose *...whereby at least a situation requiring a reset operation appears at the host unit; and*

receiving a reset command at the host unit and thereupon causing the host unit to initiate a reset operation of the host computer.

However, Heider disclosed *...whereby at least a situation requiring a reset operation appears at the host unit; and*

receiving a reset command at the host unit and thereupon causing the host unit to initiate a reset operation of the host computer. Heider sent a remote reset request to the console computer. Heider, column 14, lines 3-17

Howse disclosed the ability to communicate with a remote system to retrieve and / or insert data. Howse, column 3, lines 1-5. Heider disclosed using a diagnostic program (column 3, lines 1-2) which would require a remote reboot of a computer when there is a system hangup or crash. Heider, column 3, lines 10-29. Remote diagnostics would require the ability to communicate with a remote system to retrieve and/or transmit data. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine Heider's remote reboot with Howse's remote terminal control system.

69. In regard to claim 161, Heider disclosed *wherein the host unit also automatically causes a reset operation whenever a connection between the remote processor and the host unit is terminated.* Heider, column 12, lines 49-59

70. In regard to claim 241, Howse disclosed *a remote access PC to facilitate communications between a host computer and a remote computer distantly located relative to each other, comprising:*

a remote access process to establish a logical data path between the host computer and the remote computer; Howse disclosed a method of interfacing a terminal controller with remote host computers via modem. Howse, column 4, lines 1-3.

Howse failed to disclose:

a control module having an AC power input to receive AC power from an external power source, an AC power output to deliver the AC power from the external power source to the host computer, a switch therebetween, and a control data input to receive

a reboot signal and thereupon interrupt AC power to the host computer by operation of the switch;

a communication circuit establishing a different logical data path between the remote computer and the communication circuit, the communication circuit delivering the reboot signal to the control module when commanded to do so by the remote computer via the different logical data path.

However, Heider disclosed:

a control module having an AC power input to receive AC power from an external power source, an AC power output to deliver the AC power from the external power source to the host computer, a switch therebetween, and a control data input to receive a reboot signal and thereupon interrupt AC power to the host computer by operation of the switch; Front panel functionality, Heider, column 6, lines 49-65

a communication circuit establishing a different logical data path between the remote computer and the communication circuit, the communication circuit delivering the reboot signal to the control module when commanded to do so by the remote computer via the different logical data path. Heider sent a remote reset request to the console computer. Heider, column 14, lines 3-17

Howse disclosed the ability to communicate with a remote system to retrieve and / or insert data. Howse, column 3, lines 1-5. Heider disclosed using a diagnostic program (column 3, lines 1-2) which would require a remote reboot of a computer when there is a system hangup or crash. Heider, column 3, lines 10-29. Remote diagnostics would require the ability to communicate with a remote system to retrieve and/or

transmit data. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine Heider's remote reboot with Howse's remote terminal control system.

71. In regard to claim 242, Howse disclosed *wherein the communication circuit is a modem.* Howes, column 4, line 3

72. Claims 159, and 162 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Heider as applied to claim 157, 160 above, and further in view of Moseley et al. (US 4,779,224).

73. In regard to claim 159, Howse in view of Heider failed to disclose *wherein the host unit receives communications from the remote processor via a telephone carrier signal and the host unit includes a carrier detect circuit and automatically causes the reset operation upon a determination made by the carrier detect circuit of the absence or presence of the carrier signal.*

74. However, Moseley disclosed *wherein the host unit receives communications from the remote processor via a telephone carrier signal and the host unit includes a carrier detect circuit and automatically causes the reset operation upon a determination made by the carrier detect circuit of the absence or presence of the carrier signal.* Moseley detected the presence or absence of a carrier detect signal. This was used to determine whether to reset the base verifying unit to receive another call. Moseley, column 4, lines 40-68.

75. The Howse/Heider combination allowed for remote control of a computing terminal and for remote reboot of a computing terminal. Moseley used the presence or absence of a carrier detect signal to connect a terminal ready line output to a voltage terminal. Moseley, column 4, lines 54-68. Heider used a "remote console functionality" to control the remote reboot. Heider, column 5, lines 56-65. The remote console functionality was controlled by "standard network components that operate in accordance with existing network standards." Heider, column 10, lines 24-27.

Moseley's terminal ready line output to a voltage terminal is a "standard network component that operates in accordance with existing network standards." It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Moseley's carrier detection system with the Howse/Heider combination.

76. In regard to claim 162, Howse in view of Heider failed to disclose *the steps of receiving communications from the remote processor via a telephone carrier signal and wherein the host unit includes a carrier detect circuit and automatically causes the reset operation upon a determination made by the carrier detect circuit of the absence or presence of the carrier signal.*

77. However, Moseley disclosed *the steps of receiving communications from the remote processor via a telephone carrier signal and wherein the host unit includes a carrier detect circuit and automatically causes the reset operation upon a determination made by the carrier detect circuit of the absence or presence of the carrier signal.* Moseley detected the presence or absence of a carrier detect signal. This was used to determine whether to reset the base verifying unit to receive another call. Moseley, column 4, lines 40-68.

78. The Howse/Heider combination allowed for remote control of a computing terminal and for remote reboot of a computing terminal. Moseley used the presence or absence of a carrier detect signal to connect a terminal ready line output to a voltage terminal. Moseley, column 4, lines 54-68. Heider used a "remote console functionality" to control the remote reboot. Heider, column 5, lines 56-65. The remote console functionality was controlled by "standard network components that operate in

accordance with existing network standards." Heider, column 10, lines 24-27. Moseley's terminal ready line output to a voltage terminal is a "standard network component that operates in accordance with existing network standards." It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Moseley's carrier detection system with the Howse/Heider combination.

79. Claims 136, 139, 144, 146, 151, and 220 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long et al. (US 4,018,990).

80. In regard to claim 136, Howse disclosed *a system for interfacing digitized keyboard signals with a computer processor generating analog video signals, comprising:*

a remote access facility; Howse, column 4, lines 1-3

a non-dedicated serial channel; and Howse, column 3, lines 32-50

a computer access interface receiving from the remote access facility via the non-dedicated serial channel the digitized keyboard signals … Howse, column 3, lines 15-31.

81. Howse failed to disclose *a computer access interface …and transmitting to the remote access facility via the non-dedicated serial channel a digitized version of the analog video signals.*

82. However, Long disclosed *a computer access interface …and transmitting to the remote access facility via the non-dedicated serial channel a digitized version of the analog video signals.* Long disclosed analog to digital conversion of video signals prior to transmission. Long, column 2, lines 14-42; column 3, line 52 – column 4, line 18

Howse disclosed feeding a remote video input to a terminal. Long disclosed that due to delays from remote sources, (column 1, lines 55-67), synchronization is necessary in a manner to prevent signal degradation. Howse received remote signals, which would be subject to the signal degradation which Long is designed to prevent.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Long's synchronization techniques into Howse.

83. In regard to claim 139, Howse disclosed *wherein the channel includes a modem-to-modem communication channel.* Howse, column 4, line 3

84. In regard to claim 144, Howse disclosed *wherein the computer access interface further receives computer keyboard commands from the computer processor and transmits the keyboard commands on the non-dedicated serial channel to the remote access facility.* Howse, column 3, lines 15-31

85. In regard to claim 146, Long disclosed *wherein the computer access interface determines changes in the analog video signals and produces the digitized version of the analog video signals in accordance with the changes.* Long, column 3, line 52 – column 4, line 4; Long, column 2, lines 14-42

86. In regard to claim 151, Howse disclosed *wherein the computer access interface includes hardware defining at least a local video port and wherein the computer access interface supports a video pass-thru mode for continuously applying the video signal to the local video port of the computer access interface.* Howse, column 4, lines 7-29

87. In regard to claim 220, Howse disclosed a *computer having a virtual path communication link with a remote computer over a network medium, comprising:* interfacing the terminal controller CPU with the remote host computers via modem, Howse, column 4, lines 1-3

a remote access engine; column 3, lines 32-37

a data bus; column 4, line 57

a set of circuit modules in communication with a set of corresponding host computers to receive analog video signals from the corresponding host computers, to digitize the analog video signals, … column 3, lines 32-37

a communication port establishing a network connection via the network medium between the remote access engine and a selected one of said set of circuit modules to receive the digitized and …and to deliver the selected digitized video signals to the remote computer for display. Column 3, lines 32-37

Howse failed to disclose …*to synchronize the video signals to a video display characteristic of the remote computer, and to present the digitized and synchronized video signals to the data bus;* and *synchronized video signals.*

However, Long disclosed …*to synchronize the video signals to a video display characteristic of the remote computer, and to present the digitized and synchronized video signals to the data bus;* and *synchronized video signals.* Long, column 2, lines 14-42

Howse disclosed feeding a remote video input to a terminal. Long disclosed that due to delays from remote sources, (column 1, lines 55-67), synchronization is necessary in a manner to prevent signal degradation. Howse received remote signals, which would be subject to the signal degradation which Long is designed to prevent. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Long's synchronization techniques into Howse.

88. Claims 137-138, and 155-156 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long as applied to claim 136 above, and further in view of Official Notice.

89. In regard to claim 137, Howse in view of Long failed to disclose *wherein the channel includes a network*. Howse disclosed remote connection of computers via modem. Howse, column 4, line 3. Official Notice is taken that at the time of invention, one of ordinary skill in the art was aware that computers that could be connected via modem could also be connected via modem. A modem is one method of creating a remote connection between two terminals over telephone, and a network can include this or a direct wireline connection. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a network with the Howse Long combination.

90. In regard to claim 138, Howse in view of Long failed to disclose *wherein the channel includes a wireline*. Howse disclosed remote connection of computers via modem. Howse, column 4, line 3. Official Notice is taken that at the time of invention, one of ordinary skill in the art was aware that computers that could be connected via modem could also be connected via modem. A modem is one method of creating a remote connection between two terminals over telephone, and a network can include this or a direct wireline connection. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a network with the Howse Long combination.

91. In regard to claim 155, Howse in view of Long failed to disclose *wherein the computer access interface generates a predefined audio signal whenever a remote access user establishes communication with the computer access interface via the remote access facility.* Official Notice is taken that modems in use at the time of invention would commonly make loud connection noises notifying a user that a remote user was connecting to the computer. It would have been obvious to one of ordinary skill in the art at the time of invention that since Howse used a modem, that the modem would "generate a predefined audio signal" when a remote user was connecting.

92. In regard to claim 156, Howse in view of Long failed to disclose *wherein the computer access interface generates a predefined visual signal whenever a remote access user establishes communication with the computer access interface via the remote access facility.* Official Notice is taken that modems in use at the time of invention had external status lights for monitoring the status of a connection. It would have been obvious to one of ordinary skill in the art at the time of invention that since Howse used a modem, that the modem would "generate a predefined visual signal" when a remote user was connecting.

93. Claim 221 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long as applied to claim 220 above, and further in view of Youngblood.

94. In regard to claim 221, Howse disclosed *each circuit module includes:*

a main CPU to coordinate a analog to digital conversion of host video signals from a corresponding host computer; Howse, column 4, lines 44-54; Howse, column 3, lines 37-47

a field programmable gate array, in communication with the main CPU; Howse, column 3, lines 37-47

a video interface circuit, in communication with the field programmable gate array, to capture the host video signals for the main CPU and field programmable gate array; Howse, column 3, lines 37-47

a video RAM to store host video signals digitized by the main CPU and field programmable gate array, and to deliver the digitized video signals to the remote access engine for delivery to the remote computer, the video RAM in communication with the field programmable gate array to receive at least video sync processing from the field programmable gate array; Howse, column 4, display RAM, lines 37-67

at least one of a … keyboard driver circuit, in communication with the main CPU, to receive, respectively, … and keyboard information from the remote computer; Howse, column 3, lines 15-31

a bus controller, in communication with the field programmable gate array, to communicate information identifying the digitized host video signals and the … and keyboard information to the remote access engine. Howse, column 4, line 58

Howse failed to disclose *at least one of a mouse driver circuit … in communication with the main CPU, to receive, respectively, mouse … information from the remote computer;*

a bus controller, in communication with the field programmable gate array, to communicate information identifying … the mouse … to the remote access engine.

However, Youngblood disclosed *at least one of a mouse driver circuit … in communication with the main CPU, to receive, respectively, mouse … information from the remote computer;*

a bus controller, in communication with the field programmable gate array, to communicate information identifying … the mouse … to the remote access engine.

Youngblood disclosed a remote terminal system. Youngblood stated the use of a mouse, keyboard, and video display unit were well known input/output devices for such systems. Youngblood, column 4, lines 17-44. The remote bus is taught in Youngblood, column 4, lines 45-62.

Howse disclosed the use of a remote terminal system. Youngblood also disclosed use of a remote terminal system, but supported a mouse. Howse, specifically disclosed the use of a conventional Apple II system. See Howse, column 2, lines 43-46. One of ordinary skill in the art was aware that the Apple II supported use of a mouse. See Sander et al., US 4,888,680, column 1, lines 17-18 for evidence of Apple II support of a mouse. Because Howse used an Apple II for a remote terminal system, and because Youngblood disclosed the well known use of a mouse as an input/output device for a terminal, and because Howse used the keyboard as an input/output device

for the system, and because Youngblood taught the mouse and keyboard were both well known input/output devices for remote terminal systems (supported by the Sander evidence), it would have been obvious to one of ordinary skill in the art at the time of invention to use the mouse of Youngblood with the Howse remote terminal system.

95. Claims 243-244, 246 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Harlan (5,168,269).

96. In regard to claim 243, Howse disclosed a *remote access device for communicating real time video signals from a host PC to a remote PC and for …entered in response to the real time video signals from the remote PC to the host PC, comprising:* Howse, column 2, lines 59-64

a video process to capture and digitize the video signals from the host PC … Howse, column 4, lines 30-66

Howse failed to disclose *communicating mouse signals;* and *including video signals indicating a position of a mouse pointer on a monitor associated with the host PC, the position of said mouse pointer identified by the video process being delayed by a period associated with the capturing and digitizing steps;*

a mouse synchronizer to capture a current mouse position of the mouse pointer on the monitor associated with the remote PC;

a video application to communicate the current mouse position of the mouse pointer on the monitor associated with the remote PC to the host PC whereupon the host PC jumps the host mouse pointer to a position coincident with the current mouse position.

However, Harlan disclosed *communicating mouse signals;* and *including video signals indicating a position of a mouse pointer on a monitor associated with the host PC, the position of said mouse pointer identified by the video process being delayed by*

a period associated with the capturing and digitizing steps; Harlan, column 3, lines 19-29

a mouse synchronizer to capture a current mouse position of the mouse pointer on the monitor associated with the remote PC; Harlan, column 3, lines 30-39

a video application to communicate the current mouse position of the mouse pointer on the monitor associated with the remote PC to the host PC whereupon the host PC jumps the host mouse pointer to a position coincident with the current mouse position. Harlan, column 4, lines 5-18

Howse disclosed a system of communicating data from a remote computer to another computer and allowing control of the remote computer by the second computer. Harlan disclosed that delays in transmitting this remote information can cause errors in mouse control by the user. Harlan, column 1, line 60 – column 2, line 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the remote mouse synchronization of Harlan with the remote control and video system of Howse.

97. In regard to claim 244, Harlan disclosed *wherein the current mouse position is communicated from the remote computer to the mouse synchronizer in the form of current X/Y coordinates of the remote computer mouse pointer.* Harlan, column 5, lines 60-64

98. In regard to claim 246, Howse disclosed *a remote access interface between a remote workstation having an associated remote monitor and a host device having an associated host monitor, comprising:*

*a video capture circuit to intercept analog video signals from the host device and applying the analog video signals to the host monitor …*Howse, column 4, lines 30-66Harlan, column 3, lines 19-29

Howse failed to disclose *a host mouse; …such that the host monitor displays a host pointer associated with the host mouse; a mouse capture circuit to capture remote mouse signals from the remote workstation over a telecommunication path and to transmit the remote mouse signals to the host device for further processing as though the remote mouse signals were received from the host mouse;*

a mouse adjustment process to cause the host pointer on the host monitor to jump to a position determined by the remote mouse signals.

However, Harlan disclosed *a host mouse;* Harlan, column 3, lines 30-39

…such that the host monitor displays a host pointer associated with the host mouse;a mouse capture circuit to capture remote mouse signals from the remote workstation over a telecommunication path and to transmit the remote mouse signals to the host device for further processing as though the remote mouse signals were received from the host mouse; Harlan, column 3, lines 30-39

a mouse adjustment process to cause the host pointer on the host monitor to jump to a position determined by the remote mouse signals. Harlan, column 4, lines 5-18

Howse disclosed a system of communicating data from a remote computer to another computer and allowing control of the remote computer by the second computer. Harlan disclosed that delays in transmitting this remote information can cause errors in

mouse control by the user. Harlan, column 1, line 60 – column 2, line 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the remote mouse synchronization of Harlan with the remote control and video system of Howse.

99. Claim 245 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Harlan as applied to claim 243 above, and further in view of Weinbaum et al (5,701,139).

100. In regard to claim 245, Harlan failed to disclose *wherein the mouse synchronizer captures the current mouse position of the mouse pointer on the monitor associated with the remote PC whenever a remote user clicks a mouse button.* However, Weinbaum disclosed *wherein the mouse synchronizer captures the current mouse position of the mouse pointer on the monitor associated with the remote PC whenever a remote user clicks a mouse button.* Weinbaum, column 14, lines 54-56.

101. Harlan disclosed the use of a synchronization system to coordinate the movement of a remote mouse with a remote computer. Harlan, column 3, lines 19-29. Weinbaum disclosed using device events to coordinate the positioning of a mouse. Weinbaum, column 1, line 64 - column 2, line 6. Harlan disclosed that delays in transmitting this remote information can cause errors in mouse control by the user. Harlan, column 1, line 60 – column 2, line 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the mouse click synchronization of Weinbaum with the remote control and video system of Howse and the mouse synchronization of Harlan.

102. Claim 145 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long as applied to claim 136 above, and further in view of Youngblood.

In regard to claim 145, Howse in view of Long failed to disclose *wherein the computer access interface further receives computer mouse commands from the computer processor and transmits the mouse commands on the non-dedicated serial channel to the remote access facility.*

However, Youngblood disclosed *wherein the computer access interface further receives computer mouse commands from the computer processor and transmits the mouse commands on the non-dedicated serial channel to the remote access facility.* Youngblood disclosed a remote terminal system. Youngblood stated the use of a mouse, keyboard, and video display unit were well known input/output devices for such systems. Youngblood, column 4, lines 17-44. The remote bus is taught in Youngblood, column 4, lines 45-62.

Howse disclosed the use of a remote terminal system. Youngblood also disclosed use of a remote terminal system, but supported a mouse. Howse, specifically disclosed the use of a conventional Apple II system. See Howse, column 2, lines 43-46. One of ordinary skill in the art was aware that the Apple II supported use of a mouse. See Sander et al., US 4,888,680, column 1, lines 17-18 for evidence of Apple II support of a mouse. Because Howse used an Apple II for a remote terminal system, and because Youngblood disclosed the well known use of a mouse as an input/output device for a terminal, and because Howse used the keyboard as an input/output device for the system, and because Youngblood taught the mouse and keyboard were both

well known input/output devices for remote terminal systems (supported by the Sander evidence), it would have been obvious to one of ordinary skill in the art at the time of invention to use the mouse of Youngblood with the Howse remote terminal system.

103. Claims 152-153 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long as applied to claim 136 above, and further in view of Heider.

104. In regard to claim 152, Howse in view of Long failed to disclose *wherein the computer processor receives AC power and the computer access interface receives a request to break the AC power and then coordinates a break in the AC power to the computer processor*

105. However, Heider disclosed *wherein the computer processor receives AC power and the computer access interface receives a request to break the AC power and then coordinates a break in the AC power to the computer processor.* Heider sent a remote reset request to the console computer. Heider, column 14, lines 3-17

Howse disclosed the ability to communicate with a remote system to retrieve and / or insert data. Howse, column 3, lines 1-5. Heider disclosed using a diagnostic program (column 3, lines 1-2) which would require a remote reboot of a computer when there is a system hangup or crash. Heider, column 3, lines 10-29. Remote diagnostics would require the ability to communicate with a remote system to retrieve and/or transmit data. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine Heider's remote reboot with Howse's remote terminal control system.

106. In regard to claim 153, Howse in view of Long failed to disclose *further including a power break component receiving the AC power and delivering the AC power to the computer processor, wherein the computer access interface delivers a power break command signal to the power break component upon receipt of the request to break.*

107. However, Heider disclosed *further including a power break component receiving the AC power and delivering the AC power to the computer processor, wherein the computer access interface delivers a power break command signal to the power break component upon receipt of the request to break*. Heider sent a remote reset request to the console computer. Heider, column 14, lines 3-17

Howse disclosed the ability to communicate with a remote system to retrieve and / or insert data. Howse, column 3, lines 1-5. Heider disclosed using a diagnostic program (column 3, lines 1-2) which would require a remote reboot of a computer when there is a system hangup or crash. Heider, column 3, lines 10-29. Remote diagnostics would require the ability to communicate with a remote system to retrieve and/or transmit data. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine Heider's remote reboot with Howse's remote terminal control system.

108. Claim 127 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of McKay as applied to claim 125 above, and further in view of Heider and further in view of Kobayashi et al. (5,363,367).

109. In regard to claim 127, Howse in view of McKay failed to disclose *wherein at least one of the plural host computer sites comprises a daisy chained configuration of host computers, the daisy chain configuration including a host unit associated with each of the host computers, wherein for each of the host computers the host unit is connected between the host computer and a source of power for the host computer, and wherein upon receipt of the cold boot command from the remote site the host unit temporarily interrupts power to the host processor of the host computer.*

110. However, Heider disclosed ...*wherein for each of the host computers the host unit is connected between the host computer and a source of power for the host computer, and wherein upon receipt of the cold boot command from the remote site the host unit temporarily interrupts power to the host processor of the host computer.* Heider sent a remote reset request to the console computer. Heider, column 14, lines 3-17

Howse disclosed the ability to communicate with a remote system to retrieve and / or insert data. Howse, column 3, lines 1-5. Heider disclosed using a diagnostic program (column 3, lines 1-2) which would require a remote reboot of a computer when there is a system hangup or crash. Heider, column 3, lines 10-29. Remote diagnostics would require the ability to communicate with a remote system to retrieve and/or transmit data. Therefore it would have been obvious to one of ordinary skill in the art at

the time of invention to combine Heider's remote reboot with Howse's remote terminal control system.

111. Howse in view of McKay in view of Heider failed to disclose *wherein at least one of the plural host computer sites comprises a daisy chained configuration of host computers, the daisy chain configuration including a host unit associated with each of the host computers.*

112. However, Kobayashi disclosed *wherein at least one of the plural host computer sites comprises a daisy chained configuration of host computers, the daisy chain configuration including a host unit associated with each of the host computers.* Kobayashi disclosed connecting computers by using daisy-chaining. Kobayashi, column 4, lines 7-15.

113. Howse disclosed accessing remote terminals using a modem, which "networks" the remote terminal and the host together. McKay disclosed connecting remote terminals through use of "the network and across multiple networks". McKay, column 10, lines 19-21. Kobayashi disclosed another method of connecting computers by using a daisy-chain system. It would have been obvious to one of ordinary skill in the art at the time of invention to use any type of network connection, including a daisy-chain, to allow the remote terminal communications of the McKay/Howse system.

114. Claims 126 and 128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of McKay as applied to claim 126 above, and further in view of Kobayashi.

115. In regard to claim 126, Howse in view of McKay failed to disclose *wherein at least one of the plural host computer sites comprises a daisy chained configuration of host computers.*

116. However, Kobayashi disclosed *wherein at least one of the plural host computer sites comprises a daisy chained configuration of host computers.* Kobayashi disclosed connecting computers by using daisy-chaining. Kobayashi, column 4, lines 7-15.

117. Howse disclosed accessing remote terminals using a modem, which "networks" the remote terminal and the host together. McKay disclosed connecting remote terminals through use of "the network and across multiple networks". McKay, column 10, lines 19-21. Kobayashi disclosed another method of connecting computers by using a daisy-chain system. It would have been obvious to one of ordinary skill in the art at the time of invention to use any type of network connection, including a daisy-chain, to allow the remote terminal communications of the McKay/Howse system.

118. In regard to claim 128, Howse in view of McKay failed to disclose *wherein at least one of the plural host computer sites comprises a daisy chained configuration of host computers, the daisy chain configuration including a host unit associated with each of the host computers wherein for at least one of the host computers the host unit is connected between the host processor and at least one of the host input device and the host display device of the at least one of the host computers.*

119. However, Kobayashi disclosed *wherein at least one of the plural host computer sites comprises a daisy chained configuration of host computers, the daisy chain configuration including a host unit associated with each of the host computers wherein for at least one of the host computers the host unit is connected between the host processor and at least one of the host input device and the host display device of the at least one of the host computers.*Kobayashi disclosed connecting computers by using daisy-chaining. Kobayashi, column 4, lines 7-15.

120. Howse disclosed accessing remote terminals using a modem, which "networks" the remote terminal and the host together. McKay disclosed connecting remote terminals through use of "the network and across multiple networks". McKay, column 10, lines 19-21. Kobayashi disclosed another method of connecting computers by using a daisy-chain system. It would have been obvious to one of ordinary skill in the art at the time of invention to use any type of network connection, including a daisy-chain, to allow the remote terminal communications of the McKay/Howse system.

121. Claims 187 and 189 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of McKay in view of Youngblood.

122. In regard to claim 187, Howse in view of McKay failed to disclose *a mouse interface to read the mouse signals and to deliver the mouse signals to the selected computer processor via from the network and the network access device.*

123. However, Youngblood disclosed *a mouse interface to read the mouse signals and to deliver the mouse signals to the selected computer processor via from the network and the network access device.*

Youngblood disclosed a remote terminal system. Youngblood stated the use of a mouse, keyboard, and video display unit were well known input/output devices for such systems. Youngblood, column 4, lines 17-44. The remote bus is taught in Youngblood, column 4, lines 45-62.

Howse disclosed the use of a remote terminal system. Youngblood also disclosed use of a remote terminal system, but supported a mouse. Howse, specifically disclosed the use of a conventional Apple II system. See Howse, column 2, lines 43-46. One of ordinary skill in the art was aware that the Apple II supported use of a mouse. See Sander et al., US 4,888,680, column 1, lines 17-18 for evidence of Apple II support of a mouse. Because Howse used an Apple II for a remote terminal system, and because Youngblood disclosed the well known use of a mouse as an input/output device for a terminal, and because Howse used the keyboard as an input/output device for the system, and because Youngblood taught the mouse and keyboard were both well known input/output devices for remote terminal systems (supported by the Sander

evidence), it would have been obvious to one of ordinary skill in the art at the time of invention to use the mouse of Youngblood with the Howse remote terminal system.

124. In regard to claim 189, Youngblood disclosed *the mouse interface communicates with the selected computer processor through a mouse port of the selected computer processor.* Youngblood stated the use of a mouse, keyboard, and video display unit were well known input/output devices for such systems. Youngblood, column 4, lines 17-44.

125. Claims 165-168 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Youngblood in view of Palmer et al. (US 5,375,068).

126. In regard to claim 165, Howse disclosed *a system, comprising:*

a user station, comprising:

an analog video source generating analog video signals;

an analog video port exhibiting the analog video signals;

a video display connected to the video port to retrieve from the port the analog video signals and to display the retrieved analog video signals;

a keyboard port for keyboard signals, the network connector also delivering keyboard signals from the remote station to the keyboard port via the established logical digital data path;

a processor to retrieve the keyboard and ... signals from the remote station and to instruct the analog video source to generate new analog video signals based on the retrieved keyboard and ... signals.

Howse failed to disclose *a video processor to receive, digitize and packetize the analog video signals into packeted digital video signals;*

a network connector to establish a logical digital data path from the user station to a remote station and to deliver the packeted digital video signals onto the established logical digital data path;

a mouse port for mouse signals, the network connector also delivering mouse signals from the remote station to the mouse port via the established logical digital data path; and

a processor to retrieve the … and mouse signals from the remote station and to instruct the analog video source to generate new analog video signals based on the retrieved … and mouse signals.

However, Youngblood disclosed *a mouse port for mouse signals, the network connector also delivering mouse signals from the remote station to the mouse port via the established logical digital data path; and*

127. *a processor to retrieve the … and mouse signals from the remote station and to instruct the analog video source to generate new analog video signals based on the retrieved…and mouse signals*

Youngblood, column 4, lines 17-44. The remote bus is taught in Youngblood, column 4, lines 45-62.

Howse disclosed the use of a remote terminal system. Youngblood also disclosed use of a remote terminal system, but supported a mouse. Howse, specifically disclosed the use of a conventional Apple II system. See Howse, column 2, lines 43-46. One of ordinary skill in the art was aware that the Apple II supported use of a mouse. See Sander et al., US 4,888,680, column 1, lines 17-18 for evidence of Apple II support of a mouse. Because Howse used an Apple II for a remote terminal system, and because Youngblood disclosed the well known use of a mouse as an input/output device for a terminal, and because Howse used the keyboard as an input/output device for the system, and because Youngblood taught the mouse and keyboard were both well known input/output devices for remote terminal systems (supported by the Sander

evidence), it would have been obvious to one of ordinary skill in the art at the time of invention to use the mouse of Youngblood with the Howse remote terminal system.

Howse and Youngblood failed to disclose *a video processor to receive, digitize and packetize the analog video signals into packeted digital video signals;*

a network connector to establish a logical digital data path from the user station to a remote station and to deliver the packeted digital video signals onto the established logical digital data path;

However, Palmer disclosed *a video processor to receive, digitize and packetize the analog video signals into packeted digital video signals;* Palmer, column 10, lines 33-62

a network connector to establish a logical digital data path from the user station to a remote station and to deliver the packeted digital video signals onto the established logical digital data path; Palmer, column 10, lines 33-62.

Howse disclosed a method of receiving video from remote terminals over a network. Howse, column 3, lines 32-38. Palmer disclosed how to transmit the video from a remote terminal. Palmer, column 5, lines 27-57. It would have been obvious to one of ordinary skill in the art at the time of invention that in order to receive the video from a remote terminal via a network as in Howse , that the video would need to be transmitted in packetized format as in Palmer.

128. In regard to claim 166, Howse disclosed *wherein the network connector includes a modem.* Howse, column 4, line 3

129. In regard to claim 167, Howse disclosed *wherein the network connector includes a router to read addresses on the packeted digital video signals and route the packeted digital video signals along the established logical digital data path based on the addresses.* Howse, column 8, lines 31-49

130. In regard to claim 168, Howse and Palmer disclosed *a plurality of user stations; the system further comprising:*

a remote computer, having:

a data entry device port to receive entry device data entered from a standard keyboard or mouse; and Howse, column 3, lines 15-31

a video processor to receive, de-digitize and de-packetize the packeted digital video signals back into the analog video signals. Palmer, column 10, lines 33-62

131. Claim 177, 183, 204-210, and 213-219 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer in view of Long.

132. In regard to claim 177, Palmer disclosed *a video digitizer for receiving analog video signals at a plurality of resolutions and for storing the video signals in a video memory of a host computer comprising:* Palmer, column 6, lines 27-36

a bus interface circuit that writes the samples of the analog video signal into the video memory of the host computer. Palmer, column 10, lines 33-62

Palmer failed to disclose *a synchronize detect circuit that detects vertical and horizontal synchronize signals from an analog video signal;*

a microprocessor that determines a clocking rate at which the analog video signal should be sampled from the timing of the vertical and horizontal synchronize signals;

a clock signal generator that produces a clock signal at the clocking rate;

an analog to digital converter that is controlled by the clock signal to sample the analog video signal,

However, Long disclosed *a synchronize detect circuit that detects vertical and horizontal synchronize signals from an analog video signal;* Long, column 2, lines 14-42

a microprocessor that determines a clocking rate at which the analog video signal should be sampled from the timing of the vertical and horizontal synchronize signals; Long, column 2, lines 14-42

a clock signal generator that produces a clock signal at the clocking rate; Long, column 3, line 52 – column 4, line 18

an analog to digital converter that is controlled by the clock signal to sample the analog video signal. Long, column 4, lines 5-18

Palmer disclosed the need to synchronize video in a remote terminal system. Palmer, column 16, lines 33-45. Long disclosed the synchronization of video in a remote terminal system. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the video synchronization of Long with the remote video transmission system of Palmer.

133. In regard to claim 183, Palmer disclosed *the host computer operates a remote access and control program that transmits the contents of the video memory to a remote computer system.* Palmer, column 10, lines 46-62

134. In regard to claim 204, Palmer disclosed *a method of converting the information contained in a video raster signal generated by a data processing device and displayed on a video display terminal associated with the data processing device, into a digital representation of that information for monitoring the information, the method comprising:*

receiving the video raster signal; and Palmer, column 6, lines 27-36

Palmer failed to disclose *converting the video raster signal into a digital signal representative of the information contained in the video raster signal independently from the data processing device.*

However, Long disclosed *converting the video raster signal into a digital signal representative of the information contained in the video raster signal independently from the data processing device.* Long, column 4, lines 5-18

Palmer disclosed the need to synchronize video in a remote terminal system. Palmer, column 16, lines 33-45. Long disclosed the synchronization of video in a remote terminal system. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the video synchronization of Long with the remote video transmission system of Palmer.

135. In regard to claim 205, Long disclosed *wherein said converting step includes the steps of determining the identity of each character displayed on the video display terminal and generating a digital code indicative of the identity of said each character displayed on the video display terminal, wherein said step of generating a digital code comprises the step of generating a series of cyclic redundancy checks from the pixel information associated with each character location on the video display terminal.* Long, column 4, lines 38-68

136. In regard to claim 206, Palmer disclosed *further comprising the step of transmitting said digital codes to a remote location.* Palmer, column 10, lines 38-45

137. In regard to claim 207, Palmer disclosed *the steps of:*

receiving said digital codes transmitted to said remote location; and Palmer, column 10, lines 46-62

displaying said digital codes received from said remote location to create an image sufficiently similar to that shown on the video display terminal to allow a user to determine the operational status of the data processing device. Palmer, column 10, lines 46-62

138. In regard to claim 208, Palmer disclosed *wherein said step of transmitting said digital codes to said remote location is performed in response to a command received from said remote location requesting that said digital codes be transmitted.* Invocation of video conference, Palmer, column 9, lines 35-49

139. In regard to claim 209, Long disclosed *analyzing a predetermined character sequence displayed on the video display terminal to determine the identity of each character displayed on said video display terminal;*

generating a digital code representative of each character in said character sequence displayed on said video display terminal; and Long, column 6, lines 37-51

storing said digital codes in a memory, whereby future unknown screen displays can be compared with said digital codes to determine the identity of characters displayed on said future unknown screen displays. Long, column 6, lines 37-51

140. In regard to claim 210, Long disclosed *receiving a horizontal synchronization signal from the data processing device; and* Long, column 4, lines 5-18

generating a pixel clock signal in synchronization with said horizontal synchronization signal, wherein said data processing device is a personal computer, and said video raster signal in intercepted between said personal computer and the video display terminal. Long, column 4, lines 5-18

141. In regard to claim 213, Palmer disclosed a *circuit module for a computer having in operation therein a remote access engine to communicate between a host server and a remote workstation, including:*

video buffer circuits to receive, respectively, red, green and blue analog video signals from the host server; Palmer, column 13, lines 21-36

a TTL converter receiving the digital video signals and converting them to a TTL format; and Palmer, column 6, lines 27-36

a video processing circuit, including a cpu and a programmable gate array, connected to the sync polarity circuits, the phase locked loop video dot clock circuit, and the TTL converter to automatically determine a graphics mode of the red, green and blue analog video signals. Palmer, column 6, lines 27-36

Palmer failed to disclose *sync polarity circuits to receive, respectively, horizontal and vertical sync signals from the host server;*

analog to digital converters communicating with the video buffer circuits to receive the red, green and blue analog video signals and convert them to digital video signals;

a phase locked loop video dot clock circuit communicating with the sync polarity circuits and outputting a dot clock signal;

However, Long disclosed *sync polarity circuits to receive, respectively, horizontal and vertical sync signals from the host server;* Long, column 4, lines 5-18, column 5, line 55 – column 6, line 7

analog to digital converters communicating with the video buffer circuits to receive the red, green and blue analog video signals and convert them to digital video signals; Long, column 6, lines 1-36

a phase locked loop video dot clock circuit communicating with the sync polarity circuits and outputting a dot clock signal; Column 5, lines 31-51

Palmer disclosed the need to synchronize video in a remote terminal system. Palmer, column 16, lines 33-45. Long disclosed the synchronization of video in a remote terminal system. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the video synchronization of Long with the remote video transmission system of Palmer.

142. In regard to claim 214, Palmer disclosed *wherein the programmable gate array includes circuitry to determine a video frame rate characteristic of the red, green and blue analog video signals.* Palmer, column 6, lines 23-26

143. In regard to claim 215, Palmer disclosed *wherein the graphics mode includes a number of available colors.* Palmer, column 6, lines 39-40

144. In regard to claim 216, Palmer disclosed *wherein the graphics mode includes a screen resolution in horizontal pixels per screen by vertical pixels per screen.* Palmer, column 6, lines 39-40

145. In regard to claim 217, Palmer disclosed *wherein the graphics mode includes a table characterizing a number of available colors versus a screen resolution in horizontal pixels per screen by vertical pixels per screen.* Palmer, column 6, lines 39-40

146. In regard to claim 218, Long disclosed *wherein the video processing circuit includes memory to store a set of predefined video graphics mode characteristics, and wherein the video processing circuit further divides the red, green and blue analog video signals into one or more video screen segment parts and compares the video screen*

segment parts to the stored predefined video graphics mode characteristics. Long, column 10, lines 29-41

147. In regard to claim 219, Long disclosed *wherein the video processing circuit includes a video checksum manager for storing and managing checksums associated with each video screen segment part.* Long, column 10, lines 29-41

148. Claims 181-182 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer in view of Long as applied to claim 177 above, and further in view of Brown et al. (US 4,748,618).

149. In regard to claim 181, Palmer in view of Long failed to disclose disclosed *a selection circuit that alternatively selects a red, green, and blue component on the analog video signal to be sampled by the analog to digital converter.*

150. However, Brown disclosed *a selection circuit that alternatively selects a red, green, and blue component on the analog video signal to be sampled by the analog to digital converter.* Brown, column 9, line 55 – column 10, line 5

151. Palmer and Long disclosed analog to digital conversion of video for transmission. Palmer taught packetization of video. Brown disclosed receiving and processing packetized video for presentation on a computer. The packetized video must be converted to an RGB analog signal in order to be displayed on a monitor, such as in the manner taught by Brown. It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Brown's RGB sampling into the Palmer / Long combination.

152. In regard to claim 182, Palmer in view of Long failed to disclose *the analog to digital converter includes separate analog to digital converters to sample the red, green, and blue components of the analog video signal.*

153. However, Brown disclosed *the analog to digital converter includes separate analog to digital converters to sample the red, green, and blue components of the analog video signal.* Brown, column 9, line 55 – column 10, line 5

154. Palmer and Long disclosed analog to digital conversion of video for transmission. Palmer taught packetization of video. Brown disclosed receiving and processing packetized video for presentation on a computer. The packetized video must be converted to an RGB analog signal in order to be displayed on a monitor, such as in the manner taught by Brown. It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Brown's RGB sampling into the Palmer / Long combination.

155. Claims 147-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long as applied to claim 136 above, and further in view of Brown.

156. In regard to claim 147, Howse in view of Long failed to disclose *wherein the computer access interface analyzes characteristics of the analog video signals and produces the digitized version of the analog video signals in accordance with results of said analysis of the analog video signal characteristics.*

157. However, Brown disclosed *wherein the computer access interface analyzes characteristics of the analog video signals and produces the digitized version of the analog video signals in accordance with results of said analysis of the analog video signal characteristics.* Brown, column 9, line 55 – column 10, line 5

158. Howse and Long disclosed analog to digital conversion of video for transmission. Howse taught receipt of video from a remote terminal Brown disclosed receiving and processing packetized video for presentation on a computer. The packetized video must be converted to an RGB analog signal in order to be displayed on a monitor, such as in the manner taught by Brown. It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Brown's RGB sampling into the Howse / Long combination.

159. In regard to claim 148, Brown disclosed *wherein the analog video signals include RGB information including RGB components and wherein the computer access interface produces the digitized version of the analog video signals by applying a digitization process to each RGB component of the RGB information.* , column 9, line 55 – column 10, line 5

160. In regard to claim 149, Brown disclosed *wherein the digitization process includes analyzing phase characteristics of each RGB component.* , column 9, line 55 – column 10, line 5

161. In regard to claim 150, Brown disclosed *wherein the digitization process includes analyzing amplitude characteristics of each RGB component.* , column 9, line 55 – column 10, line 5

162. Claim 140 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long as applied to claim 136 above, and further in view of Stifle et al. (4,633,462).

163. In regard to claim 140, Howse in view of Long failed to disclose *wherein the computer processor includes a computer keyboard port and a computer video device port, the computer access interface including a dedicated link to the keyboard port for transmitting the keyboard signals to the computer processor and including another dedicated link to the video device port for receiving the analog video signals from the computer processor.*

164. However, Stifle disclosed *wherein the computer processor includes a computer keyboard port and a computer video device port, the computer access interface including a dedicated link to the keyboard port for transmitting the keyboard signals to the computer processor and including another dedicated link to the video device port for receiving the analog video signals from the computer processor.* Stifle disclosed the ability for a computer terminal to be connected to a network with a dedicated communication link for keyboard and video communications. Stifle, column 3, lines 20-27.

165. Howse disclosed remote communications with a remote terminal, and Stifle disclosed that such processes could be sped up to the point of imperceptible delay by a user by using a dedicated communications link. It would have been obvious to one of ordinary skill in the art at the time of invention to use dedicated communication links with the Howse, Long combination.

166. Claims 239-240 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Belt et al. (5,446,904).

167. In regard to claim 239, Brown disclosed *a circuit for communicating RGB video information from a Host computer to a remote computer via a network link, comprising:*

video input circuitry to receive the RGB video information from the Host computer; Brown, column 9, line 55 – column 10, line 5

video processing circuitry to digitize the RGB video information and to decode a video format of the RGB video information received by the video input circuitry; and Brown, column 9, line 55 – column 10, line 5

an address mux receiving the digitized RGB video information as a stream of digital RGB pixel data; Brown, column 10, lines 6-18

a flash palette converter RAM being addressed by the stream of digital RGB pixel data and outputting for each RGB pixel a palette index byte corresponding to a color value of said RGB pixel. Brown, column 10, lines 6-33

Brown failed to disclose the use of a flash palette.

However, Belt disclosed the use of a flash palette. Belt, column 31, line 28 – column 32, line 7.

Brown disclosed the use of RGB information to display video. Belt disclosed the common use of a flash palette, which is used as a processing component of presenting video, to set the color scheme. It would have been obvious to one of ordinary skill in the art at the time of invention to use a flash palette as taught in Belt with Brown's RGB video processing.

168. In regard to claim 240, Brown disclosed *further including a pixel assembly circuit to condense a number of palette index bytes into a single assembled pixel byte for storage, including:*

a logic array receiving the video format of the RGB video information from the video processing circuitry and receiving the palette index byte from the flash palette converter circuit; and Brown, column 10, lines 6-18

a set of flip-flops controlled by the logic array to assemble the number of palette index bytes as a function of a characteristic of the video format of the RGB video information. Brown, column 10, lines 6-18

169. Claim 169, 170, 172, 175 and 176 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Palmer in view of Ishikawa.

170. In regard to claim 169, Howse disclosed *a system for controlling a target computer from a remote workstation of the type that includes a keyboard, a mouse, and a monitor, comprising:* Howse, column 3, lines 15-63

a host processor and associated video memory and …; Howse, column 3, lines 15-31

the host processor operating a remote access and control program that transmits the contents of the video memory to the remote workstation and receives the contents of the keyboard/mouse buffers from the remote workstation, both over a communication link. Howse, column 3, lines 15-31

Howse failed to disclose *keyboard/mouse buffers;*

a video digitizer coupled to the host processor that receives analog video signals from the target computer, samples the video signals, and stores the video signals in the video memory;

a keyboard/mouse interface that receives keyboard and mouse signals from the remote workstation and stores them in the keyboard/mouse buffers; and

However, Palmer disclosed *a video digitizer coupled to the host processor that receives analog video signals from the target computer, samples the video signals, and stores the video signals in the video memory;* Palmer, column 10, lines 33-62.

Howse disclosed a method of receiving video from remote terminals over a network. Howse, column 3, lines 32-38. Palmer disclosed how to transmit the video

from a remote terminal. Palmer, column 5, lines 27-57. It would have been obvious to one of ordinary skill in the art at the time of invention that in order to receive the video from a remote terminal via a network as in Howse , that the video would need to be transmitted in packetized format as in Palmer.

171. Howse and Palmer failed to disclose *keyboard/mouse buffers;* and

a keyboard/mouse interface that receives keyboard and mouse signals from the remote workstation and stores them in the keyboard/mouse buffers; and

172. However, Ishikawa disclosed *keyboard/mouse buffers;* and

a keyboard/mouse interface that receives keyboard and mouse signals from the remote workstation and stores them in the keyboard/mouse buffers; and

173. Ishikawa disclosed both keyboard and mouse buffers and interface. Ishikawa, column 10, lines 25-50.

174. Ishikawa is designed for controlling a remote terminal by use of keyboard buffers to prevent inputting additional data before the data can be processed. Howse was designed for remote control of a terminal using a keyboard. It would have been obvious to one of ordinary skill in the art that when using a remote terminal as in Howse, buffering would need to be employed on input/output devices as in Ishikawa to prevent data overruns.

175. In regard to claim 170, Ishikawa disclosed *wherein the contents of the keyboard/mouse buffers are forwarded to a keyboard and mouse input on the target computer*. Ishikawa, column 10, lines 25-50

176. In regard to claim 172, Howse disclosed *wherein the communication link is a telephone line*. Howse, column 4, line 3

177. In regard to claim 175, Palmer disclosed *wherein the video digitizer includes a phase lock loop that produces a clocking signal having a frequency substantially equal to the time at which pixel values are transmitted in the video signal and a gating counter that passes the clocking signal to an analog to digital converter that samples the video signal during an active video portion of the video signal*. Palmer, column 10, lines 33-45. The PLL with clocking signal having the same frequency to the pixel values and gating counter are inherent to the analog-to-digital conversion described in Palmer, column 10, lines 33-45.

178. In regard to claim 176, Palmer disclosed *wherein the video digitizer alternatively samples a single color video signal in a frame of video data and stores the samples in the video memory.* Palmer, column 10, lines 33-45

179. Claims 173-174 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long in view of Ishikawa as applied to claim 169 above, and further in view of Official Notice.

180. In regard to claim 173, Howse in view of Long in view of Ishikawa failed to disclose *wherein the communication link is a logical data path.* Howse disclosed remote connection of computers via modem. Howse, column 4, line 3. Official Notice is taken that at the time of invention, one of ordinary skill in the art was aware that computers that could be connected via modem could also be connected via modem. A modem is one method of creating a remote connection between two terminals over telephone, and a network can include this or a logical data path. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a logical data path with the Howse Long Ishikawa combination.

181. In regard to claim 174, Howse in view of Long in view of Ishikawa failed to disclose *wherein the communication link is a network.* Howse disclosed remote connection of computers via modem. Howse, column 4, line 3. Official Notice is taken that at the time of invention, one of ordinary skill in the art was aware that computers that could be connected via modem could also be connected via modem. A modem is one method of creating a remote connection between two terminals over telephone, and a network can include this or a logical data path. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a network with the Howse Long combination.

182. Claim 222 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Collins et al. (US 5,003,595).

183. Claim 212 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Beard et al. (US 4,937,036).

184. In regard to claim 212, Howse disclosed *a remote access system communicating with a digital network transmission medium to communicate user input signals from a remote computer to a host computer via the transmission medium and video signals from the host computer to the remote computer via the transmission medium, the remote access system comprising:*

a user input process to capture the user input signals for digital transmission to the host computer;

a standard remote access engine:

to communicate the user input signals on the transmission medium between the host and remote computers, and

Howse failed to disclose *a video process to capture the video signals, digitize them and format them for transmission to the remote computer, even when the host computer has locked up to no longer accept any user input signals;*

to communicate the video signals, in digital format, on the transmission medium between the host and remote computers, even when the host computer has locked up to no longer accept any user input signals.

However, Beard disclosed *a video process to capture the video signals, digitize them and format them for transmission to the remote computer, even when the host computer has locked up to no longer accept any user input signals;*

to communicate the video signals, in digital format, on the transmission medium between the host and remote computers, even when the host computer has locked up to no longer accept any user input signals.

Beard disclosed freezing the functionality of an emulating processor to select the data from the frozen processor to be copied. Beard, column 4, lines 44-61.

185. Howse disclosed the display of data from a remote processor on another terminal. Beard disclosed a method of simultaneously displaying a proprietary system on another system. Beard, column 2, lines 39-59. It would have been obvious to one of ordinary skill in the art to include Beard's method of simultaneously displaying a proprietary system on another system with Howse's method of displaying a remote processor's output on another terminal in order to assist an administrator with debugging a remote terminal.

186. Claim 194, 195, and 199-203 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long in view of Beard.

187. In regard to claim 194, Howse disclosed *a computer monitoring system for monitoring the information displayed on a video display terminal connected to, and receiving display information from, a data processing device, the computer monitoring system comprising:*

Howse failed to disclose *a microprocessor controlled computer hardware device working even if the data processing device is locked up and no longer processing data or input commands, wherein the microprocessor controlled computer hardware device includes a video raster signal input circuit for receiving a video raster signal representative of the information displayed on the video display terminal from the data processing device and a converter communicating with the video raster signal input circuit to convert the video raster signal into a digital signal representative of the information contained in the video raster signal.*

188. However, Long disclosed *wherein the microprocessor controlled computer hardware device includes a video raster signal input circuit for receiving a video raster signal representative of the information displayed on the video display terminal from the data processing device and a converter communicating with the video raster signal input circuit to convert the video raster signal into a digital signal representative of the information contained in the video raster signal.* Long disclosed analog to digital conversion of video signals prior to transmission. Long, column 2, lines 14-42; column 3, line 52 – column 4, line 18

Howse disclosed feeding a remote video input to a terminal. Long disclosed that due to delays from remote sources, (column 1, lines 55-67), synchronization is necessary in a manner to prevent signal degradation. Howse received remote signals, which would be subject to the signal degradation which Long is designed to prevent. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Long's synchronization techniques into Howse.

189. Howse in view of Long failed to disclose *a microprocessor controlled computer hardware device working even if the data processing device is locked up and no longer processing data or input commands.*

However, Beard disclosed *a microprocessor controlled computer hardware device working even if the data processing device is locked up and no longer processing data or input commands.* Beard disclosed freezing the functionality of an emulating processor to select the data from the frozen processor to be copied. Beard, column 4, lines 44-61.

190. Howse disclosed the display of data from a remote processor on another terminal. Beard disclosed a method of simultaneously displaying a proprietary system on another system. Beard, column 2, lines 39-59. It would have been obvious to one of ordinary skill in the art to include Beard's method of simultaneously displaying a proprietary system on another system with Howse's method of displaying a remote processor's output on another terminal in order to assist an administrator with debugging a remote terminal.

191. In regard to claim 195, Long disclosed *wherein said converter comprises a character determiner for determining the identity of each character displayed on the video display terminal and for generating a digital code indicative of the identity of said each character displayed on the video display terminal, and* Long, column 4, lines 38-68

192. *wherein said character determiner comprises circuitry for generating a series of cyclic redundancy checks, wherein each said cyclic redundancy check is generated from the pixel information associated with each character location on the video display terminal* Long, column 4, lines 38-68

193. In regard to claim 199, Howse disclosed *a network for interconnecting a plurality of said microprocessor controlled computer hardware devices with one another and for allowing a user at said remote location to selectively access any one of said microprocessor controlled computer hardware devices or its associated data processing device.* Howse disclosed using a single keyboard to selectively display any inputs from a remote terminal. Howse, column 2, lines 15-29

194. In regard to claim 200, Long disclosed *a memory connected with said converter for storing said digital codes to retain an image of the information displayed on the video display terminal; and* Long, column 4, lines 38-68

195. *a controller coupled to said memory and said converter for monitoring changes to said image and for storing said digital codes representative of said changes in said memory, whereby said memory contains a series of image frames that can be used by an operator to determine the cause of a system failure.* Long, column 4, lines 38-68

196. In regard to claim 201, Long disclosed *a trainer coupled to said character determiner for generating a predetermined character display and for storing said digital codes generated by said character determiner representative of each character on said predetermined display; and* Long, column 4, lines 38-68

a comparator communicating with said trainer and said character determiner for comparing said digital codes generated for an unknown display on said video display terminal with said digital codes representative of each character on said predetermined display, whereby the identity of each character displayed on said unknown display can be determined. Long, column 4, lines 38-68

197. In regard to claim 202, Long disclosed *a synchronization signal input circuit for receiving from the data processing device a horizontal synchronization signal, and a pixel clock generator connected with said synchronization signal input circuit and said converter for generating a pixel clock signal,* Long, column 4, lines 5-18

wherein said data processing device is a personal computer, and said video raster signal input circuit comprises a circuit interconnected between said personal computer and the video display terminal. Long, column 4, lines 5-18

198. In regard to claim 203, Long disclosed *wherein the data processing device is a personal computer, wherein the video raster signal input circuit is coupled to said personal computer for receiving a video raster signal and a horizontal synchronization signal from said personal computer, and wherein the system further comprises:* Long, column 4, lines 5-18

a video signal output circuit coupled to said video display terminal and said video signal input circuit for supplying said video raster signal and said horizontal synchronization signal to said video display terminal; Long, column 4, lines 5-18

a host site command input circuit located with said personal computer for receiving commands from a host site user to be processed by said personal computer; Howse, column 3, lines 15-31

a command output circuit coupled to said local command input circuit and with a standard keyboard interface of said personal computer for supplying commands to be processed by said personal computer to said standard keyboard interface of said personal computer; Howse, column 3, lines 15-31

a transmitter coupled to said converter and said command output circuit for transmitting said digital signal to a remote location and for transmitting commands received from said remote location to said command output circuit; Howse, column 3, lines 15-31

a remote command input circuit at said remote location coupled to said transmitter for receiving commands to be transmitted to and executed by said personal computer; and Howse, column 3, lines 15-31

a remote video display for receiving said digital signals representative of the information contained in said video raster signal and for displaying said signals to allow a user at said remote location to view the information displayed on said video display terminal coupled to said personal computer, Howse, column 3, lines 6-14

wherein the converter comprises a pixel clock generator for generating a pixel clock signal; Long, column 4, lines 5-18

whereby computer service personnel at the remote location can determine the present operating status of the file server, determine repair action to be taken if necessary, and initiate said repair action by transmitting commands to be executed by said personal computer to said personal computer. Howse, column 3, lines 6-14

199. Claims 196-198 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long in view of Beard, and further in view of Palmer.

200. In regard to claim 196, Howse in view of Long in view of Beard failed to disclose *a transmitter coupled to said converter for transmitting said digital code to a remote location*

201. However, Palmer disclosed *a transmitter coupled to said converter for transmitting said digital code to a remote location.* Palmer, column 10, lines 38-45

Palmer disclosed the need to synchronize video in a remote terminal system. Palmer, column 16, lines 33-45. Long disclosed the synchronization of video in a remote terminal system. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the video synchronization of Long with the remote video transmission system of Palmer.

202. In regard to claim 197, Howse in view of Long in view of Beard failed to disclose *a receiver at said remote location coupled to said transmitter for receiving said digital codes transmitted by said transmitter; and*

203. *a remote video display coupled to said receiver for displaying said digital codes received from said receiver, said display showing an image sufficiently similar to that shown on the video display terminal to allow a user to determine the operational status of the data processing device.*

204. However, Palmer disclosed *a receiver at said remote location coupled to said transmitter for receiving said digital codes transmitted by said transmitter; and* Palmer, column 10, lines 46-62

a remote video display coupled to said receiver for displaying said digital codes received from said receiver, said display showing an image sufficiently similar to that shown on the video display terminal to allow a user to determine the operational status of the data processing device. Palmer, column 10, lines 46-62

Palmer disclosed the need to synchronize video in a remote terminal system. Palmer, column 16, lines 33-45. Long disclosed the synchronization of video in a remote terminal system. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the video synchronization of Long with the remote video transmission system of Palmer.

205. In regard to claim 198, Howse in view of Long in view of Beard failed to disclose *wherein said digital codes are transmitted to a remote location in response to a command received from said remote location requesting that said digital codes be transmitted.*

206. However, Palmer disclosed *wherein said digital codes are transmitted to a remote location in response to a command received from said remote location requesting that said digital codes be transmitted.* Invocation of video conference, Palmer, column 9, lines 35-49

Palmer disclosed the need to synchronize video in a remote terminal system. Palmer, column 16, lines 33-45. Long disclosed the synchronization of video in a remote terminal system. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the video synchronization of Long with the remote video transmission system of Palmer.

207. Claims 224-226 rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Collins (US 5,003,595) and further in view of Heider.

208. In regard to claim 226, Howse disclosed a *remote access device to remotely control a host computer and to receive at a remote location a video signal from the host computer, comprising:*

a remote access engine between the host computer and the remote location to coordinate delivery of data packets along a telecommunications link between the host computer and the remote location; Howse, column 3, lines 15-31

Howse failed to disclose *a remote access controller, including a remote access control card communicating with the telecommunications link, to read a present caller ID associated with the remote location, to store a list of predefined caller IDs, to compare the present caller ID with the list and to disable the remote access engine whenever the present caller ID fails to match any from the list of predefined caller IDs.*

However, Collins did disclose *a remote access controller, including a remote access control card communicating with the telecommunications link, to read a present caller ID associated with the remote location, to store a list of predefined caller IDs, to compare the present caller ID with the list and to disable the remote access engine whenever the present caller ID fails to match any from the list of predefined caller IDs.* Collins, column 2, line 60 – column 3, line 19. Collins maintained a record of acceptable automatic number identification number information (caller ID information), and used it to determine whether to allow access to the system.

Howse disclosed a remote access system for a terminal. Collins stated that such systems must be secure from the intrusion of outsiders to protect data. Collins, column 1, lines 15-24. A user of Howse at the time of invention would have been well aware of computer hacking attempts and the need to protect a system from any hacking attempts. It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the number identification techniques of Collins as an additional security measure in Howse.

209. Howse in view of Collins failed to disclose *an external modem and a control module providing AC power to the host computer, the external modem communicating with the control module and automatically answering calls received by the external modem on a different telecommunications link, said control module temporarily interrupting power to the host computer whenever said external modem automatically answers a call.*

However, Heider disclosed *an external modem and a control module providing AC power to the host computer, the external modem communicating with the control module and automatically answering calls received by the external modem on a different telecommunications link, said control module temporarily interrupting power to the host computer whenever said external modem automatically answers a call.* Heider sent a remote reset request to the console computer. Heider, column 14, lines 3-17

Howse disclosed the ability to communicate with a remote system to retrieve and / or insert data. Howse, column 3, lines 1-5. Heider disclosed using a diagnostic program (column 3, lines 1-2) which would require a remote reboot of a computer when

there is a system hangup or crash. Heider, column 3, lines 10-29. Remote diagnostics would require the ability to communicate with a remote system to retrieve and/or transmit data. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine Heider's remote reboot with Howse's remote terminal control system.

210. Claim 154 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howse in view of Long as applied to claim 136 above, and further in view of Ward et al (US 5,367,670.

211. In regard to claim 154, Howse in view of Long failed to disclose *wherein the computer access interface includes a page alert process generating an outgoing phone call to a predefined page number whenever a remote access user of the remote access facility fails to enter an appropriate access code.*

212. However, Ward disclosed *wherein the computer access interface includes a page alert process generating an outgoing phone call to a predefined page number whenever a remote access user of the remote access facility fails to enter an appropriate access code.* Ward disclosed sending an alert message to a manager facility via pager. Ward, column 9, lines 4-10.

213. Howse disclosed a system of transmitting information from a remote terminal to a local terminal. Ward received information from a remote terminal, and notified a person via pager about the status of the information. Howse was designed to monitor remote terminals, and it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate Ward's pager interface with the Howse invention to ease notification of a system administrator about data from the remote terminal.

Allowable Subject Matter

214. Claims 1-21 are allowed.

215. Claims 178-180 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 178-180 remain rejected under the oath and declaration.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571)272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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